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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/691,093

10/22/2003

Anthony Billington

27049-7

4788

54620

7590

08/25/2006

KRIEG DEVAULT LLP

ONE INDIANA SQUARE

SUITE 2800

INDIANAPOLIS, IN 46204-2079

EXAMINER

FRANTZ, JESSICA L

ART UNIT

PAPER NUMBER

3746

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/691,093

Applicant(s)

BILLINGTON, ANTHONY

Examiner

Jessica L. Frantz

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3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/9/05, 7/22/04, 2/5/2004</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The Information Disclosure Statement's (IDS) submitted on 9/9/2005, 7/22/2004, and 2/5/2004 are acknowledged. The references listed therein have been considered.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: on the last line of page 3, the word "ab ve" should be changed to "above".
4. The examiner suggests the inclusion of typical heading for different portions of the Specification such as:
 - Technical Field
 - Background Art
 - Disclosure of Invention
 - Brief Description of Drawings

- Detailed Description of Invention

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Shizuo (JP04027798 A). Shizuo discloses a compressor wheel assembly comprising a compressor wheel (2) mounted to a rotating shaft (1a) the shaft extending through a bore (3 and 4) provided along the rotational axis of the wheel, wherein the bore has a first axial portion (3) corresponding in diameter to the diameter of the shaft and a second axial portion (4) of enlarged diameter, such that the inner surface of the second portion of the bore is radially spaced from the shaft. Shizuo also discloses an internal radial shoulder is defined between said first and second axial portions of the bore. (Please see Figure 8). Furthermore, Shizuo discloses there is a gradual increase in bore diameter between said first and second axial portions of the bore. (Please see Figure 2). Also that the first axial portion of the bore extends from one axial end surface of the compressor wheel. As shown in Figure 2, the first axial portion of the bore starts from the left side of the compressor wheel. Also shown in Figure 2, Shizuo teaches a cylindrical sleeve (6) is located around said shaft extending radially between the inner surface of the second portion of the bore and the outer surface of the shaft.

In reference to claims 6 and 7, Shizuo teaches a compressor wheel (2) for mounting to a rotating shaft (1a) of predetermined diameter, the compressor wheel being provided with an axial through bore (3 and 4) for receiving an end of said shaft, wherein the through bore has a first axial portion (3) corresponding in diameter to said predetermined diameter of the shaft, and a second axial portion (4) of greater diameter than said predetermined diameter of the shaft and that a cylindrical sleeve (6) is fitted within the second portion of the bore, the sleeve having an internal diameter corresponding to the diameter of the first portion of the bore. (Please see Figure 2).

7. Claims 1, 2, 4, 6, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Greber (6,052,897). Greber discloses compressor wheel assembly comprising a compressor wheel (14) mounted to a rotating shaft (6 and 19) the shaft extending through a bore (20 and 28) provided along the rotational axis of the wheel, wherein the bore has a first axial portion (20) corresponding in diameter to the diameter of the shaft and a second axial portion (28) of enlarged diameter, such that the inner surface of the second portion of the bore is radially spaced from the shaft. Furthermore, that an internal radial shoulder is defined between said first and second axial portions of the bore. (Please see Figure 2). Also, Greber discloses the first axial portion of the bore extends from one axial end surface of the compressor wheel. As shown in Figure 2, the first axial portion of the bore starts from the right side of the compressor wheel.

In regards to claim 6, Greber again discloses a compressor wheel (14) for mounting to a rotating shaft (6 and 19) of predetermined diameter, the compressor wheel being provided with an axial through bore (20 and 28) for receiving an end of

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said shaft, wherein the through bore has a first axial portion (20) corresponding in diameter to said predetermined diameter of the shaft, and a second axial portion (28) of greater diameter than said predetermined diameter of the shaft.

Also in regards to claim 8, Greber discloses a turbocharger comprising a turbine wheel (7) mounted to one end of a shaft (6 and 19) for rotation within a turbine housing (3), and a compressor wheel (14) mounted to the other end of the shaft for rotation within a compressor housing (13), the compressor wheel having an axial through bore (20 and 28) extending between a first axial surface of the wheel (See Figure 2, left side of compressor wheel) and a second axial surface of the wheel (See Figure 2, right side of compressor wheel), said second axial surface facing away from said turbine, wherein the bore has a first axial portion (20) of internal diameter corresponding to the diameter of the shaft and a second axial portion (28) of enlarged diameter, such that the inner surface of the enlarged diameter portion of the bore is radially spaced from the shaft, and wherein said first axial portion of the bore extends from said first axial end surface of the compressor wheel part way towards said second axial end surface of the wheel.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references have shown the invention substantially as claimed:

- Johnson (3,601,501)
- Aguilar et al. (6,017,184)
- Goetzke et al. (5,163,816)

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- Alford (2,377,740)
- Schippers et al. (4,364,717)
- Stefano et al. (3,200,753)

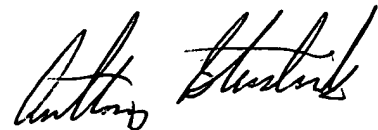
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica L. Frantz whose telephone number is 571-272-5822. The examiner can normally be reached on Monday through Friday 8:30a.m.-5:00p.m. E.S.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Thorpe can be reached on (571)272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JF

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ANTHONY D. STASHICK
PRIMARY EXAMINER